

Robotics Systems Types - Feature #2449

Modify existing types to completely represent the information available through Kinect2

11/27/2015 03:44 PM - M. Goerlich

Status:	Resolved	Start date:	11/27/2015
Priority:	Normal	Due date:	
Assignee:	J. Wienke	% Done:	100%
Category:	Type Proposal	Estimated time:	0.00 hour
Target version:	rsb-0.13		

Description

I use the `sandbox:rst.tracking.TrackedPosture3DFloat` datatype to publish kinect skeletons. I make two proposals:

- regarding `stable:rst.kinematics.Posture3DFloat`

Since the kinect also offers a joint rotation (which, as far as I know, represents the global rotation of the bone connecting it to its parent in a coordinate system, where the y-axis is aligned with the bone) it would be cool if this information could be transmitted.

- regarding `sandbox:rst.tracking.TrackedPosture3DFloat`

There are several skeleton tracking systems out there and they all different sets of names of skeletons etc. It would be helpful to include such info inside the data type so only the datatype and the definition by the tracking system is required to understand the data. At the moment the software publishing the data also plays a role since it defines the order of the joints transmitted.

Associated revisions

Revision 01e1e2be - 01/28/2016 10:33 AM - M. Goerlich

Added name and rotation to `rst.kinematics.Posture3DFloat`

fixes #2449

Signed-off-by: Johannes Wienke <wienke@techfak.uni-bielefeld.de>

History

#1 - 12/17/2015 09:17 AM - J. Wienke

- Status changed from New to In Progress

- Assignee set to J. Wienke

- Target version set to rsb-0.13

With respect to the first patch (rotation):

- Can we use a constraint that the lengths of both repeated fields must match in case the second one is used?

Regarding the second patch:

- Since the joints are actually represented in `Posture3DFloat`, to my mind, it would make more sense to have the repeated field for the joint names there. Even if we do not track, someone might still give names to such entities.

#2 - 01/06/2016 10:31 AM - J. Wienke

ping?

#3 - 01/08/2016 11:40 AM - M. Goerlich

- File 0001-Added-name-and-rotation-to-rst.kinematics.Posture3DF.patch added

Both ideas sound fine. I searched for more information about constraints but their does not seem to be a real language behind this, is it?

By now i just added:

```
// @constraint(len(.rotation) = len(.position))
```

```
// @constraint(len(.name) = len(.position))
```

Since repeated fields are unused if the length is zero you would actually have to use some "or" keyword. Is there anything planned for this? If I could just use the word "or" i would write something like:

```
len(.rotation) = 0 or len(.rotation) = len(.position)
```

#4 - 01/11/2016 09:40 AM - J. Wienke

M. Goerlich wrote:

Both ideas sound fine. I searched for more information about constraints but their does not seem to be a real language behind this, is it?

Not yet ;)

Since repeated fields are unused if the length is zero you would actually have to use some "or" keyword. Is there anything planned for this? If I could just use the word "or" i would write something like:

[...]

That would be ok. Just add parens to clarify the conditions.

#5 - 01/27/2016 06:47 PM - M. Goerlich

- File deleted (0003-add-rotation-to-rst.kinematics.Posture3DFloat.patch)

#6 - 01/27/2016 06:47 PM - M. Goerlich

- File deleted (0004-Add-name-of-posture-element.patch)

#7 - 01/27/2016 06:47 PM - M. Goerlich

- File deleted (0001-Added-name-and-rotation-to-rst.kinematics.Posture3DF.patch)

#8 - 01/27/2016 06:48 PM - M. Goerlich

- File 0001-Added-name-and-rotation-to-rst.kinematics.Posture3DF.patch added

Sorry for the long delay. I modified the constraints as mentioned before.

#9 - 01/28/2016 10:33 AM - M. Goerlich

- Status changed from *In Progress* to *Resolved*

- % Done changed from 0 to 100

Applied in changeset commit:rst-protol01e1e2beaa19fa2a85ba457c60ec6ce3ee19831a.

Files

0001-Added-name-and-rotation-to-rst.kinematics.Posture3DF.patch	1.49 KB	01/27/2016	M. Goerlich
---	---------	------------	-------------